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EXAMINER

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ART UNIT PAPER NUMBER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/027,577
Filing Date: December 20, 2001
Appellant(s): KAMALVANSI ET AL.

Alicia M. Choi
Reg. No. 46,621
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed July 12, 2006 appealing from the Office action mailed February 7, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

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The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,615,364	Marks	3-1997
5,649,089	Kilner	7-1997
6,411,969	Tam	6-2002
6,105,021	Bertis	8-2000
5,317,742	Bapat	5-1994

McCloghrie et al., "Structure of Management Information Version 2 (SMIv2)", April 1999.

Elmasri et al, "Fundamentals of Database Systems", 3rd ed, 2000, pp. 8.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-21 are rejected under 35 U.S.C. 103.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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Claims 1-7, 9-15, and 17-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent No. 5,615,364 of Marks in view of US Patent No. 5,649,089 of Kilner referred hereinafter "Kilner", US Patent No. 6,411,969 of Tam, and US Patent No. 6,105,021 of Bertis.

In regards to claim 1, 9, and 17, Marks discloses a system and method for providing persistency fault tolerant data stored in a database on a device in a networked environment for an external application, the device having an active processor system and a standby processor system, the system and method comprising the following steps:

providing an identical standby copy of the active database located on the active processor system, on the standby processor system as a standby database (see column 3 lines 1-15),

monitoring the active processor for a failure (see column 3 lines 15-20),

assuming control by the standby processor system assumes control when the failure is detected (see column 3 lines 15-20),

wherein switching from the active database to the standby database is transparent to the external application (see column 2 lines 5-10).

However, Marks fails to disclose:

maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization; and

a magic number is kept to distinguish any tar and zipped file with the standby database.

Kilner discloses:

maintaining a checksum for each record in an active database located in the active processor system (see column 3 lines 32-40) and checking the checksum during initialization (see column 3 lines 52-60 and column 4 lines 55-66).

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to maintain a checksum for each record in an active database located in the active processor system and check the checksum during initialization. A person of ordinary skill in the art at the time of the invention would have been motivated because Marks disclose a active and a standby database (see column 3 lines 15-25) and maintaining a checksum for each record in an active database located in the active processor system and checking the checksum during initialization, as per teaching of Kilner, enables maintenance of integrity between a active and a standby database (see column 3 lines 35-41).

Furthermore, Tam discloses:

a database backup, which is a snapshot of an entire database or parts or a database (see column 9 lines 65-67), and whether the backup is compressed or not compressed (see column 6 lines 30-35). Tam also discloses a storing a serial number (see column 6 lines 30-35), indicating a magic number to distinguish any compressed file with the standby database.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to compress files and keep a magic number to distinguish it. A person of ordinary skill in the art at the time of the invention would have been motivated because Marks is concerned with providing fault tolerance (see column 3 lines 15-25) and including a compressed database backup, which is a snapshot of an entire database or parts of a database (see column 9 lines 65-67), as per teaching Tam, provides additional fault tolerance.

Lastly, Berstis discloses:

tar and zip files are known compression files (see column 7 lines 58-60)

It would have been obvious to one of ordinary skill in the art at the time the invention was made wherein the compressed files are tar and zip files, thus indicating a magic number is kept to distinguish any tar and zipped file with the standby database. A person of ordinary skill in the art at the time of the invention would have been motivated because Tam is concerned with compressing data (see column 6 lines 34-35) and compressing data using tar and zip files, as per teachings of Bertis, is a known and commonly used compression technique (see column 7 lines 58-60).

In regards to claim 2, 10, and 18, Tam discloses

a database backup, which is a snapshot of an entire database or parts of a database (see column 9 lines 65-67), identifying tape name (signature), and whether the backup is compressed or not compressed (see column 6 lines 30-35), indicating a compressed backup copy of the database with signature on the active processor system and on the standby processor system

In regards to claim 3 and 11, Tam disclose:

recovering data from the compressed backup copy when a failure event occurs (see column 1 lines 24-26).

In regards to claim 4 and 12, Tam disclose:

recovering data from the compressed backup copy when a corruption event occurs (see column 5 lines 16-19).

In regards to claim 5, 6, 13, 14, 20, and 21, Marks discloses a database (see column 2 lines 48). Since a database is a file of records, each containing fields together with a set of functions, it is necessary and thus inherent to define a database using a predetermined format and

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to generate structure and metadata corresponding to the database using the definition in the predetermined format.

In regards to claim 7 and 15, Marks discloses:

accessing the database through an application program interface (see column 3 lines 5-8).

In regards to claim 19, Tam discloses:

recovering data from the compressed backup copy when a failure event or corruption event occurs (see column 1 lines 24-26 and column 5 lines 16-19).

Claims 8 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Marks in view of Kilner, Tam, and Bertis, and in further view of US Patent No. 5,317,742 of Bapat and publication "Structure of Management Information Version 2 (SMIv2)" by McCloghrie et al. referred hereinafter "McCloghrie".

In regards to claim 8 and 16, Marks in view of Kilner, Tam, and Bertis fail to explicitly disclose:

wherein the predetermined format is Structure of Management Information version 2 (SMIv2) format.

However, Bapat discloses Structure of Management Information (SMI) is used to design the formats and templates for data structures within a database (see column 7 lines 59-64).

It would have been obvious to one of ordinary skill in the art at the time the invention was made wherein the predetermined format is Structure of Management Information (SMI) format. A person of ordinary skill in the art at the time of the invention would have been

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motivated because SMI is known predetermined format used to design the formats and templates for data structures within a database, as per teaching of Bapat (see column 7 lines 59-64).

Furthermore, McCloghrie discloses Structure of Management Information version 2 (SMIv2) as a current version of Structure of Management Information (see page 3 bottom paragraph).

It would have been obvious to one of ordinary skill in the art at the time the invention was made wherein the predetermined format is Structure of Management Information version 2 (SMIv2) format. A person of ordinary skill in the art at the time of the invention would have been motivated because Bapat discloses Structure of Management Information and structure of Management Information version 2 (SMIv2) is a more current up to date version of Structure of Management Information, as per teaching of McCloghrie.

(10) Response to Argument

Applicant's arguments filed July 12, 2006 have been fully considered but they are not persuasive.

Independent Claim 1

In response to applicant's argument: "A combination of Marks, Kilner, Tam, and Berstis would provide a primary and backup database operation in a redundant controller system maintaining a cumulative checksum of the entire database in a network controller. Tam would provide to the combination of the references that when dumping a zip file or a tar file to a tape, information would need to be used to identify the tape. This information would include the tape name, the cycle number, the version number, workers, the serial number, compression and non-

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compression, the density, and the SCRATCHPOOL option. See column 6, lines 27-35 of Tam. If a disk is used, according to Tam, it is only necessary to specify the file title for the entire dump and the number of DUMP files. See column 6, lines 36-38 of Tam. However, there is no teaching or suggestion in the combination of Marks, Kilner, Tam, or Berstis that the information would be kept to distinguish any tar and zipped file with the standby database.

When dumping is done to tape, according to Tam, it is necessary to furnish information common to any disk-to-tape process and this information would include the tape name, the cycle number, the version number, workers, the serial number, compression and non-compression, the density, and the SCRATCHPOOL option. See column 6, lines 27-35. The information being provided in Tam is not to distinguish any tar and zipped file with the standby database. Rather, the information provided is one that is necessary to a disk-to-tape process.

Accordingly, a combination of Marks, Kilner, Tam, and Berstis would not teach or suggest, at least, 'switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database,' as recited in independent claim 1. Therefore, Appellants respectfully request that the rejection of independent claim 1 be reversed," (see pages 10-12) examiner respectfully disagrees.

The claim cites among other things "a magic number is kept to distinguish any tar and zipped file with the standby database." For support, the specification cites: "A backup copy (snapshot) of the database is made using tar and compression techniques. This backup mechanism is similar to the standard application. In addition, a magic number is kept to distinguish any tar and zipped file with the database snapshot" (see page 11 of specification).

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Tam discloses providing a dump or backup copy of a database onto tape (see page 6 line 28).

Tam further discloses when backing up or dumping to tape, it is necessary to furnish information common to any disk-to-tape process, such as serial number, indicating a magic number (see page 6 lines 28-34). As the serial number is stored or furnished with the dump or backup copy of the database, it distinguishes the backup file(s) with the standby database. Tam further teaches such backup could be compressed (see column 6 line 34), indicating a magic number is kept to distinguish any compressed file with the standby database. Bertis further discloses tar and zip files are known compression files (see column 7 lines 58-60). As such, the combination of Tam and Bertis teach, "a magic number is kept to distinguish any tar and zipped file with the standby database." Examiner maintains his rejection

In response to applicant's argument, "Additionally, the use of four references to make a rejection of the present claims is an indicator that the Office Action is attempting to use an improper piecemeal analysis of various references in order to make this rejection.

Specifically, as commonly understood, the Examiner bears the burden of establishing a prima facie case of obviousness based upon the prior art ... '[the Examiner] can satisfy this burden only by showing some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead that individual to combine the relevant teachings of the references.' See *In re Fritch*, 23 USPQ 2d 1780, 1783 (Fed. Cir. 1992).

It appears that the final office action is using the recitations of the claims of the present application to arrive to the combination of Marks, Kilner, Tam, and Bertis. 'One cannot use hindsight reconstruction to pick and choose among isolated disclosures in the prior art to

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deprecate the claimed invention.' See *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ 2d 1596, 1600 (Fed. Cir. 1988). Accordingly, Appellants respectfully request that this rejection be reversed," (see page 12) examiner respectfully disagrees.

In response to applicant's argument that the examiner has combined an excessive number of references, reliance on a large number of references in a rejection does not, without more, weigh against the obviousness of the claimed invention. See *In re Gorman*, 933 F.2d 982, 18 USPQ2d 1885 (Fed. Cir. 1991).

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Claim 6

Applicant states that claim 6 include all the recitations of the base claim and any intervening claims, and as such, the arguments presented above supporting the patentability of independent claim 1 are incorporated herein (see page 15). Since examiner has maintained his rejection for independent claim 1 for reasons explained above, claim 6 remains rejected for the same reasons.

In response to applicant's further argument, "Applicants further submit that the office action's citation of column 2, line 48, of Marks is misplaced. The referred portion of Marks is limited to providing that Marks uses two computers each of which incorporates a Primary Database and a Communications Agent. The referred portion of Marks is devoid of any teaching or suggestion providing "generating structure and metadata corresponding to the database using the definition in the predetermined format" as recited in claim 6. Although the final office action recognizes that Marks does not clearly teach such recitations, the final office action conclusively asserts that it would have been inherent to arrive to the claimed recitations of dependent claim 6," (see page 15) examiner respectfully disagrees.

The claim cites among other things "generating structure and metadata corresponding to the database using the definition in the predetermined format." As indicated above, Marks discloses a database (see column 2 lines 48). Since a database is a file of records, each containing fields together with a set of functions, it is necessary and thus inherent to generate structure and metadata corresponding to the database using the definition in the predetermined format. Further proof is disclosed in "Fundamentals of Database Systems", which is provided herein as extrinsic evidence, that meta-data, which describes the structure of the database, is included within the database (see page 8). Examiner maintains his rejection.

Claim 7

Applicant states that claim 7 include all the recitations of the base claim and any intervening claims, and as such, the arguments presented above supporting the patentability of independent claim 1 are incorporated herein (see page 16). Since examiner has maintained his

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rejection for independent claim 1 for reasons explained above, claim 7 remains rejected for the same reasons.

In response to applicant's further argument, "Applicants further submit that the office action's citation of column 3, lines 5-8, of Marks is misplaced. The referred portion of Marks is limited to providing that whenever an application program (such as a database shall) cause a modification to the primary database, a message is sent from the database to the local communications agent. The referred portion of Marks is devoid of any teaching or suggestion providing "accessing the active database through an application program interface," as recited in claim 7. There is no accessing of an active database through an application program interface in Marks," (see page 17) examiner respectfully disagrees.

The claim cites among other things "accessing the database through an application program interface." Marks discloses "an application program (such as a database shell) causing a modification to the primary database" (see page 3 lines 5-7). There necessarily must be an application program interface in order for an application program to communicate with the database. Examiner maintains his rejection.

Independent Claim 9

Claim 9 recites the same argument of claim 1 (see pages 17-18). Examiner maintains his rejection for the same reason cited under Claim 1, as indicated above.

In response to applicant's further argument, "In addition, a combination of Marks, Kilner, Tam, and Berstis would not provide assuming control by the standby processor system when the failure is detected wherein switching from the active database to the standby database is

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transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database in association with a control means,” (see page 18) examiner respectfully disagrees.

The claim merely cites among other things, “control means for assuming control by the standby processor system when the failure is detected wherein switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database.” Examiner notes the claim fails to cite “in association with a control means.” Marks discloses control means for assuming control by the standby processor system when the failure is detected wherein switching from the active database to the standby database is transparent to an external application (see column 3 lines 15-20). Furthermore, Tam in view of Bertis discloses a magic number is kept to distinguish any tar and zipped file with the standby database, as indicated previously. As such, the combination of Marks, Tam, and Bertis discloses the claimed “control means for assuming control by the standby processor system when the failure is detected wherein switching from the active database to the standby database is transparent to an external application and a magic number is kept to distinguish any tar and zipped file with the standby database.” Examiner maintains his rejection.

Claim 14

Applicant states that claim 14 include all the recitations of the base claim and any intervening claims, and as such, the arguments presented above supporting the patentability of independent claim 9 are incorporated herein (see page 21). Since examiner has maintained his

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rejection for independent claim 9 for reasons explained above, claim 14 remains rejected for the same reasons.

Furthermore, Claim 14 recites the same argument of claim 6 (see page 21). Examiner maintains his rejection for the same reason cited under Claim 6, as indicated above.

Claim 15

Applicant states that claim 15 include all the recitations of the base claim and any intervening claims, and as such, the arguments presented above supporting the patentability of independent claim 9 are incorporated herein. Since examiner has maintained his rejection for independent claim 9 for reasons explained above, claim 15 remains rejected for the same reasons.

Furthermore, Claim 15 recites the same argument of claim 7 (see page 22). Examiner maintains his rejection for the same reason cited under Claim 7, as indicated above.

Independent Claim 17

Claim 17 recites the same arguments of claim 1 (see pages 17-18). Examiner maintains his rejection for the same reason cited under Claim 1, as indicated above.

Regarding Claims 2,3,4,5,8,10,11,12,13,16,18,19,20, and 21, applicant merely states such claims include all the recitations of the base claim and any intervening claims, and as such, the arguments presented above supporting the patentability of independent claims are incorporated

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herein (see pages 12-29). Since examiner has maintained his rejection of the independent claims for reasons explained above, these claims remain rejected for the same reasons.

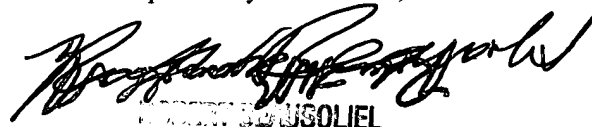
(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.


For the above reasons, it is believed that the rejections should be sustained.

ecp
10/4/06

Respectfully submitted,


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